

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**IN THE CLAIMS**

1-10. (canceled)

11. (Currently amended) An ordered ~~redundant~~-array of immobilized oligonucleotides in the array's x and y coordinates with multiple copies of a sequence of interest extending in the array's z dimension produced by:

(a) providing: i) a solid support comprising a plurality of positions for oligonucleotides, said positions defined by x and y coordinates; ii) a plurality of identical oligonucleotides, each oligonucleotide comprising a sequence, wherein said oligonucleotide comprises a 5' end which is attached to the solid support and a 3' end; and iii) a plurality of unique circular DNA templates, each circular DNA template comprising a sequence of interest and a region complementary to at least a portion of said sequence of said oligonucleotide oligonucleotides, said sequence of interest being different for each circular DNA template;

(b) immobilizing one oligonucleotide from said plurality of identical oligonucleotides in each of said positions on said solid support to create an ordered array comprising a plurality of identical immobilized oligonucleotides, each of which is described by its position defined by its x and y coordinates;

(c) adding to each immobilized oligonucleotide of said ordered array a circular DNA template from said plurality of said unique circular DNA templates under conditions such that each said immobilized oligonucleotide hybridizes to a said circular DNA template to create a plurality of primed circular templates hybridized to immobilized oligonucleotides at positions defined by their x and y coordinates, each primed circular template comprising a different sequence of interest; and

(d) extending each of said hybridized immobilized oligonucleotides using a polymerase primed circular templates along a z coordinate to create an ordered array of

extended immobilized oligonucleotides, wherein each extended immobilized oligonucleotide has a position on the array defined by its z and y coordinates, and is extended in the z dimension such that comprising at least two copies of said sequence of interest, thereby generating an ordered redundant array of extended immobilized oligonucleotides, wherein said ordered redundant array refers to said array having each extended immobilized oligonucleotide comprises comprising at least two copies of said sequence of interest along the z coordinate extending in the z dimension, wherein there is one copy of the sequence of the 3' end of the original unextended oligonucleotide in the z dimension for each copy of the sequence of interest extending in the z dimension.

12-22. (canceled)

23. (Currently amended) An ordered redundant array of immobilized oligonucleotides in the array's x and y coordinates with multiple copies of a sequence of interest extending in the array's z dimension produced by:

a) providing: i) a solid support comprising a plurality of positions for oligonucleotides, said positions defined by x and y coordinates; and ii) a plurality of pairs of corresponding oligonucleotides and circular DNA templates, wherein each circular DNA template comprises a sequence of interest, and the corresponding oligonucleotide for each circular DNA template comprises a sequence, wherein said oligonucleotide comprises a 5' end which is attached to the solid support and a 3' end, and further wherein said oligonucleotide comprises oligonucleotides, each oligonucleotide comprising a sequence complementary to a different portion of the sequence of interest on the corresponding circular DNA template; said target nucleic acid; and iii) a plurality of corresponding circular DNA templates, each circular DNA template comprising a different portion of the sequence of said target;

b) immobilizing each of said oligonucleotides in one oligonucleotide in each of said positions on said solid support to create an ordered array comprising a plurality of immobilized oligonucleotides, each of which is described by its position defined by its x and y coordinates;

c) adding to each immobilized oligonucleotide of said ordered array ~~along a z-coordinate~~ a corresponding circular DNA template under conditions such that said immobilized oligonucleotide hybridizes to said corresponding circular DNA template to create a plurality of ~~primed~~ circular templates each of which is hybridized to its corresponding immobilized oligonucleotide at a position defined by its x and y coordinates; and

d) extending said hybridized immobilized oligonucleotides using a polymerase primed circular templates to create an ordered redundant array of extended immobilized oligonucleotides, wherein each extended immobilized oligonucleotide has a position on the array defined by its x and y coordinates, and is extended in the z dimension such that comprising at least two copies of said portion of said sequence of said target nucleic acid, wherein said ordered redundant array refers to said array having each extended immobilized oligonucleotide comprises comprising at least two copies extending in the z dimension along the z coordinate of said portion of the sequence of interest contained in said hybridized primed circular template, wherein there is one copy of the sequence of the 3' end of the original unextended oligonucleotide in the z dimension for each copy of the sequence of interest extending in the z dimension.

24. (Currently amended) The ordered redundant array of claim 11, wherein said ordered redundant array has at least three copies of the sequence of interest extending in the Z dimension.

25. (Currently amended) The ordered redundant array of claim 11, wherein said ordered redundant array has at least 10 copies of the sequence of interest extending in the Z dimension.

26. (Currently amended) The ordered redundant array of claim 11, wherein said ordered redundant array has at least 50 copies of the sequence of interest extending in the Z dimension.

27. (Currently amended) The ordered ~~redundant~~ array of claim 23, wherein said ordered redundant array has at least three copies of the sequence of interest extending in the Z dimension.
28. (Currently amended) The ordered ~~redundant~~ array of claim 23, wherein said ordered redundant array has at least 10 copies of the sequence of interest extending in the Z dimension.
29. (Currently amended) The ordered ~~redundant~~ array of claim 23, wherein said ordered redundant array has at least 50 copies of the sequence of interest extending in the Z dimension.
30. (Currently amended) An ordered ~~redundant~~ array of immobilized oligonucleotides in the array's x and y coordinates with multiple copies of a sequence of interest extending in the array's z dimension comprising:
- a solid support comprising a substrate, wherein said substrate contains i) a plurality of positions for oligonucleotides, said positions defined by x and y coordinates; and ii) a plurality of extended oligonucleotides immobilized on the substrate which extend into the z coordinate, wherein each extended immobilized oligonucleotide comprises a sequence of interest, wherein each sequence of interest is different for each extended immobilized oligonucleotide and corresponds to a portion of a target, and wherein each extended immobilized oligonucleotide comprises at least two copies of said sequence of interest such that the array has redundancy in the z-dimension, and wherein there is one copy of the sequence of the 3' end of the original unextended oligonucleotide in the z dimension for each copy of the sequence of interest.
31. (Currently amended) The ordered ~~redundant~~ array of claim 30, wherein each extended immobilized oligonucleotide comprises at least three copies of said sequence of interest.
32. (Currently amended) The ordered ~~redundant~~ array of claim 30, wherein each extended immobilized oligonucleotide comprises at least 10 copies of said sequence of interest.

33. (Currently amended) The ordered redundant array of claim 30, wherein each extended immobilized oligonucleotide comprises at least 50 copies of said sequence of interest.
34. (Currently amended) The ordered redundant array of claims 11 and 23, wherein at least two copies of a template nucleic acid or a fragment thereof corresponding to the sequence of interest are hybridized to at least one of the extended immobilized oligonucleotides comprising at least two copies of the sequence of interest along the z coordinate.
35. (Currently amended) The ordered redundant array of claims 25, 26, 27, 28, and 29, wherein at least two copies of a template nucleic acid or a fragment thereof corresponding to the sequence of interest are hybridized to at least one of the extended immobilized oligonucleotides comprising the sequence of interest along the z coordinate.
36. (Currently amended) The ordered redundant array of claims 30, 31, 32, and 33, wherein at least two copies of a template nucleic acid or a fragment thereof corresponding to the sequence of interest are hybridized to at least one of the extended immobilized oligonucleotides comprising the sequence of interest along the z coordinate.
37. (Previously presented) The ordered array of claim 32, wherein at least ten copies of a template nucleic acid or a fragment thereof are hybridized to said corresponding sequence of interest of at least one of the extended immobilized oligonucleotides comprising the sequence of interest along the z coordinate.
38. (Previously presented) The ordered array of claim 33, wherein at least fifty copies of a template nucleic acid or a fragment thereof are hybridized to said corresponding sequence of interest of at least one of the extended immobilized oligonucleotides comprising the sequence of interest along the z coordinate.